

**OPTICAL PROBE FOR DETERMINING
THE FAT/LEAN INTERFACE IN CUTS OF MEAT**

ABSTRACT OF THE DISCLOSURE

5 An apparatus and method for locating the boundary surface between a layer of fatty tissue and lean tissue in a cut of meat, such as beef, such as slabs of meat undergoing trimming and cutting in commercial meat processing facilitates. The invention exploits the fact that fatty tissue and lean tissue have significantly different responses to incident light energy. By gauging the degree to which a generated beam of light is scattered and reflected by the tissues

10 under evaluation, the invention permits the character of the tissue to be ascertained. An incident beam of light, such as green light, is generated and transmitted to a probe tip, which tip is inserted into the cut of meat under investigation. The light beam is emitted into the meat tissues from the probe tip, and then is scattered and reflected by the tissues, whereupon some fraction of the emitted light returns to the probe tip. The returning light energy is transmitted

15 to a detector; relative changes in the returning light transmitted to the detector permit the operator to determine when the probe tip is approaching or penetrating the fat/lean tissue interface.